This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Previously Presented) A coating composition which, when applied to a substrate and cured, provides an abrasion resistant coating on the substrate which has a refractive index, the coating composition comprising:

an aqueous organic solvent mixture containing hydrolysis products and partial condensates of an epoxy functional silane, a metal oxide composite colloid, a disilane and a carboxylic acid functional compound wherein the disilane is represented by the formula $(R^{10}O)_xR^{11}_{3-x}Si\text{-}R^{12}_y\text{-}SiR^{13}_{3-x}(OR^{14})_x$, where x is 0, 1, 2 or 3 and y is 0 or 1, R^{11} and R^{13} are H or an alkyl group containing from about 1 to 10 carbon atoms, a functionalized alkyl group, an alkylene group, an aryl group, an alkylpolyether group and combinations thereof, R^{10} and R^{14} are H, an alkyl group containing from about 1 to 10 carbon atoms, an acetyl group, and combinations thereof, wherein if y is 1 then R^{12} can be an alkylene group containing from about 1 to 12 carbon atoms, an alkylenepolyether containing from about 1 to 12 carbon atoms, an aryl group, an alkylene substituted aryl group, an alkylene group which may contain one or more olefins, or an oxygen or sulfur atom, and further wherein if x = 0

then R^{11} and R^{13} is a chlorine or bromine atom, and wherein the carboxylic acid functional compound is selected from the group consisting of monofunctional carboxylic acids, multifunctional carboxylic acids, anhydrides, and combinations thereof, and further wherein the epoxy functional silane is present in a molar ratio to the disilane component and the metal oxide composite colloid component of from about 0.1:1 to 4:1.

2. (Original) The coating composition of claim 1, wherein the hydrolysis products and partial condensates of the epoxy functional silane are present in the aqueous-organic solvent mixture in an amount from about 10 to about 90 weight percent, based on the total solids of the composition.

3. (Original) The coating composition of claim 1, wherein the carboxylic acid functional compound is present in the aqueous-organic solvent mixture in an amount of from about .01 to 90 weight percent, based on the total weight of the composition.

4. (Original) The coating composition of claim 1, wherein the disilane component is present in the aqueous-organic solvent mixture in an amount of

from about .01 to 85 weight percent, based on the total solids of the composition.

5. (Original) The coating composition of claim 1, wherein the metal oxide composite colloid component is present in the aqueous-organic solvent mixture in an amount of from about .01 to 80 weight percent based on the total solids of the composition.

6. (Original) The coating composition of claim 1, wherein the solvent constituent of the aqueous-organic solvent mixture is selected from the group consisting of an alcohol, an ether, a glycol ether, an ester, a ketone, a glycolether acetate and combinations thereof.

7. (Original) The coating composition of claim 1, wherein the solvent constituent of the aqueous-organic solvent mixture is an alcohol having the general formula ROH where R is an alkyl group containing from about 1 to about 10 carbon atoms.

8. (Original) The coating composition of claim 1, wherein the solvent constituent of the aqueous organic solvent mixture is selected from the group consisting of a glycol, an ether, a glycol ether and mixtures thereof having the

formula R^1-$(OR^2)_x$-OR^1 where x is an integer of 0, 1, 2, 3, or 4, R^1 is H or an alkyl group containing from about 1 to about 10 carbon atoms and R^2 is an alkylene group containing from about 1 to about 10 carbons atoms and combinations thereof.

9. (Original) The coating composition of claim 1, wherein the epoxy functional silane is represented by the formula $R^4_xSi(OR^5)_{4-x}$ where x is an integer of 1, 2 or 3, R^4 is H, an alkyl group, a functionalized alkyl group, an alkylene group, an aryl group, an alkyl ether, and combinations thereof containing from 1 to about 10 carbon atoms and having at least 1 epoxy functional group, and R^5 is H, an alkyl group containing from 1 to about *5* carbon atoms, an acetyl group, a $-Si(OR^6)_{3-y}R^7_y$ group where y is an integer of 0, 1, 2, or 3, where R^6 is H, an alkyl group containing from 1 to about 5 carbon atoms an acetyl group, another $-Si(OR^6)_{3-y}R^7_y$ group and combinations thereof, and R^6 is H, an alkyl group, a functionalized alkyl group, an alkylene group, an aryl group, an alkyl ether and combinations thereof containing from 1 to about 10 carbon atoms.

10. (Original) The coating composition of claim 1, wherein the carboxylic acid functional compound is represented by the formula $R^8(COOR^9)_x$ where x is an integer of 1, 2, 3, or 4, and where R^8 is H, an alkyl group, a functionalized

alkyl group, an alkylene group, an aryl group, a functionalized aryl group, an alkyl ether, and combinations thereof containing from 1 to about 10 carbon atoms, and where R^9 is H, a formyl group, a carbonyl group, or an acyl group, where the acyl group can be functionalized with an alkyl group, a functionalized alkyl group, an alkylene group, an aryl group, a functionalized aryl group, an alkyl ether, and combinations thereof containing from 1 to about 10 carbon atoms, and where R^8 and R^9 may or may not be joined by a chemical bond.

11. (Original) The coating composition of claim 1, further comprising alumina, silica, titania, zirconia, tin oxide, antimony oxide, iron oxide, lead oxide, bismuth oxide, and combinations thereof and wherein at least one of the metal oxide components present in the composite mixture is neither alumina nor silica.

12. (Cancelled)

13. (Original) The coating composition of claim 1, wherein the amount of water present in the aqueous organic solvent mixture is an amount sufficient to provide a substantially homogeneous mixture of hydrolysis products and partial condensates of all reactive components.

14. (Original) The coating composition of claim 13, further comprising an effective amount of co-hydrolysis catalyst thereby enhancing the hydrolysis rates of the hydrolyzable components.

15. (Original) The coating composition of claim 1, further comprising an effective amount of a catalyst thereby providing enhanced abrasion resistance to a coating produced by curing the composition.

16. (Original) The coating composition of claim 15, wherein the effective amount of the catalyst is from about 0.01 to about 2 weight percent, based on the total solids of the composition.

17. (Original) The coating composition of claim 1, wherein the aqueous organic solvent mixture further comprises an effective amount of a leveling agent thereby allowing the aqueous-organic solvent mixture to be spread on the substrate thereby providing substantially uniform contact of the aqueous organic solvent mixture with the substrate.

18. (Original) The coating composition of claim 1, wherein the aqueous organic solvent mixture further comprises from about 0.1 to about 70 weight percent, based on the total solids of the composition, of a mixture of hydrolysis

products and partial condensates of a silane additive represented by the formula $R^{15}_xSi(OR^{16})_{4-x}$ where x is an integer of 0, 1, 2 or 3, R^{15} is H, an alkyl group containing from 1 to about 10 carbon atoms, a functionalized alkyl group, an alkylene group, an aryl group an alkyl ether group and combinations thereof, R^{16} is H, an alkyl group containing from 1 to about 10 carbon atoms, an acetyl group and combinations thereof.

19. (Original) The coating composition of claim 18, wherein the amount of water present in the aqueous organic solvent mixture is an amount sufficient to provide a substantially homogeneous mixture of hydrolysis products and partial condensates of all reactive components.

20. (Original) The coating composition of claim 19, further comprising an effective amount of co-hydrolysis catalyst thereby enhancing the hydrolysis rates of the hydrolyzable components.

21. (Original) The coating composition of claim 20, further comprising an effective amount of a catalyst thereby providing enhanced abrasion resistance to a cured coating.

22. (Original) The coating composition of claim 21, wherein the effective amount of the catalyst is from about 0.01 to about 2 weight percent, based on the total solids of the composition.

23. (Original) The coating composition of claim 19, wherein the aqueous-organic solvent mixture further comprises an effective amount of a leveling agent thereby allowing the aqueous organic solvent mixture to be spread on the substrate thereby providing substantially uniform contact of the aqueous-organic solvent mixture with the substrate.

24. - 37. (Cancelled)

38. (Previously Presented) A coating composition which, when applied to a substrate and cured, provides an abrasion resistant coating on the substrate which has a refractive index, the coating composition comprising:

an aqueous organic solvent mixture containing hydrolysis products and partial condensates of an epoxy functional silane, a metal oxide composite colloid, a disilane and a carboxylic acid functional compound wherein the carboxylic acid functional compound is selected from the group consisting of monofunctional carboxylic acids, multifunctional carboxylic acids, anhydrides, and

combinations thereof, and further wherein the epoxy functional silane is present in a molar ratio to the disilane component and the metal oxide composite colloid component of from about 0.1:1 to 4:1;

from about 0.1 to about 70 weight percent, based on the total solids of the composition, of an acidic colloidal component, and wherein the amount of water present in the aqueous-organic solvent mixture is an amount sufficient to provide a substantially homogeneous mixture of hydrolysis products and partial condensates of all reactive components; and

an effective amount of a leveling agent thereby allowing the aqueous-organic solvent mixture to be spread on the substrate thereby providing substantially uniform contact of the aqueous-organic solvent mixture with the substrate.

39. (Previously Presented) A coating composition which, when applied to a substrate and cured, provides an abrasion resistant coating on the substrate which has a refractive index, the coating composition comprising:

an aqueous organic solvent mixture containing hydrolysis products and partial condensates of an epoxy functional silane, a metal oxide composite colloid, a disilane, a carboxylic acid functional compound

wherein the carboxylic acid functional compound is selected from the group consisting of monofunctional carboxylic acids, multifunctional carboxylic acids, anhydrides, and combinations thereof, and from about 0.1 to about 70 weight percent, based on the total solids of the composition, of a mixture of hydrolysis products and partial condensates of a silane additive represented by the formula $R^{15}_xSi(OR^{16})_{4-x}$ where x is an integer of 0, 1, 2 or 3, R^{15} is H, an alkyl group containing from 1 to about 10 carbon atoms, a functionalized alkyl group, an alkylene group, an aryl group, an alkyl ether group and combinations thereof, R^{16} is H, an alkyl group containing from 1 to about 10 carbon atoms, an acetyl group and combinations thereof wherein the epoxy functional silane is present in a molar ratio to the disilane component and the metal oxide composite colloid component of from about 0.1:1 to 4:1; and

from about 0.1 to about 70 weight percent, based on the total solids of the composition, of an acidic colloidal silica component and wherein the amount of water present in the aqueous organic solvent mixture is an amount sufficient to provide a substantially homogenous mixture of hydrolysis products and partial condensates of all reactive components.

40. (Cancelled)

41. (Currently Amended) The coating composition of claim ~~40~~ 39, further comprising an effective amount of co-hydrolysis catalyst to enhance the hydrolysis rates of the hydrolyzable components.

42. (Previously Presented) The coating composition of claim 41, further comprising an effective amount of a catalyst thereby providing enhanced abrasion resistance to a cured coating.

43. (Previously Presented) The coating composition of claim 42, wherein the effective amount of the catalyst is from about 0.01 to about 2 weight percent, based on the total solids of the composition.

44. (Previously Presented) The coating composition of claim 43, wherein the aqueous organic solvent mixture further comprises an effective amount of a leveling agent thereby allowing the aqueous organic solvent mixture to be spread on the substrate thereby providing substantially uniform contact of the aqueous organic solvent mixture with the substrate.

45. (Previously Presented) A coating composition which, when applied to a substrate and cured, provides an abrasion resistant coating on the substrate which has a refractive index, the coating composition comprising:

an aqueous organic solvent mixture containing hydrolysis products and partial condensates of an epoxy functional silane, a metal oxide composite colloid, a disilane and a carboxylic acid functional compound wherein the carboxylic acid functional compound is selected from the group consisting of monofunctional carboxylic acids, multifunctional carboxylic acids, anhydrides, and combinations thereof, and further wherein the epoxy functional silane is present in a molar ratio to the disilane component and the metal oxide composite colloid component of from about 0.1:1 to 4:1; and

from about 0.1 to about 70 weight percent, based on the total solids of the composition of a colloidal silica component, and wherein the colloidal silica component is acidic, basic or neutral.

46. (Previously Presented) The coating composition of claim 45, wherein the preferred colloidal silica component is an acidic colloidal component.

47. (Previously Presented) The coating composition of claim 46, wherein the amount of water present in the aqueous-organic solvent mixture is an amount sufficient to provide a substantially homogeneous mixture of hydrolysis products and partial condensates of all reactive components.

48. (Previously Presented) The coating composition of claim 47, further comprising an effective amount of co-hydrolysis catalyst thereby enhancing the hydrolysis rates of the hydrolyzable components.

49. (Previously Presented) The coating composition of claim 48, further comprising an effective amount of a catalyst thereby providing enhanced abrasion resistance to a cured coating.

50. (Previously Presented) The coating composition of claim 49, wherein the effective amount of the catalyst is from about 0.01 to about 2 weight percent, based on the total solids of the composition.

51. (Previously Presented) The coating composition of claim 45, wherein the colloidal silica component is an acidic colloidal component.

52. (Previously Presented) A coating composition which, when applied to a substrate and cured, provides an abrasion resistant coating on the substrate which has a refractive index, coating composition comprising:

an aqueous organic solvent mixture containing hydrolysis products and partial condensates of an epoxy functional silane, a metal oxide composite colloid, a disilane and a carboxylic acid functional compound from about 0.1 to about 70 weight percent, based on the total solids of the composition, of a mixture of hydrolysis products and partial condensates of a silane additive represented by the formula $R^{15}_xSi(OR^{16})_{4-x}$ where x is an integer of 0, 1, 2 or 3, R^{15} is H, an alkyl group containing from 1 to about 10 carbon atoms, a functionalized alkyl group, an alkylene group, an aryl group an alkyl ether group and combinations thereof, R^{16} is H, an alkyl group containing from 1 to about 10 carbon atoms, an acetyl group and combinations thereof and wherein the carboxylic acid functional compound is selected from the group consisting of monofunctional carboxylic acids, multifunctional carboxylic acids, anhydrides, and combinations thereof, and wherein the epoxy functional silane is present in a molar ratio to the disilane component and the metal oxide composite colloid component of from about 0.1:1 to 4:1; and

from about 0.1 to about 70 weight percent, based on the total solids of the composition, of a colloidal silica component, and wherein the colloidal silica component is acidic, basic or neutral.